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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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FOLEY AND LARDNER LLP SUITE 500 3000 K STREET NW WASHINGTON, DC 20007			EXAMINER YOO, REGINA M	
			ART UNIT 1744	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/525,375	Applicant(s) WUEST, ROBERT	
	Examiner Regina Yoo	Art Unit 1744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) 11-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2/23/05, 12/07/05</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group I, claims 1-10 in the reply filed on 4/13/107 is acknowledged. The traversal is on the ground(s) that the corresponding special technical features of the two groups are not disclosed in the WO 98107454 reference. More specifically, the applicant has stated that the three corresponding features is 1) active agent dispersed in a matrix of polymer forming a spongelike composition, 2) active/deodorizing agent slowly released and evaporated from the spongelike composition and 3) the spongelike composition being incorporated between two parallel boards open on all sides, and that the above mentioned reference does not disclose these three features. This is not found persuasive because first, the argument that the parallel boards must be open on all sides for a stream of air to flow between the two parallel boards is deemed as not the only scenario/interpretation since a stream of air can flow two parallel boards with only two sides open and the other two sides closed or even in case where all sides of the two parallel boards are closed, when the air enters from a porous top and/or bottom parallel board and flows between the two boards. Secondly, the argument regarding difference between the active agent of the reference being incorporated by copolymerization in the polymer film is not same as that of the applicant's dispersion of active agent is not persuasive as both the dispersion by doping or through copolymerization disperses active agent in the substrate whether unbound or bound. Thirdly, the argument that deodorant film is not volatile and cannot

release and evaporate is found persuasive. However, it is well known in the art to utilize a copolymerized matrix with volatile fragrance as exemplified by O'Leary (5780527) and it would have been obvious to provide a copolymerized matrix with volatile fragrance in Ayukawa ('454) as shown by O'Leary ('527). Fourthly, the argument that there is no hint that the polymer film may be incorporated between two parallel boards is found not persuasive in the reference since the WO97107454 does disclose a laminated configuration in which the deodorant polymer film is interposed between two polymer films (see page 12, lines 6-8). Finally, the argument with respect to the feature that a stream of air flows between the parallel boards is not persuasive as this limitation is not recited in the device claims and is therefore not considered as a corresponding feature.

Hoyt (5304358) also discloses the three corresponding features is 1) active agent dispersed in a matrix of polymer forming a spongelike composition (25; see entire document, particularly Col. 1, lines 59-60 wherein a blotter is deemed to produced from a matrix of polymer (such as cellulose when the blotter is manufactured from paper or various other types of polymer when blotter is made from synthetics) forming a spongelike composition), 2) active/deodorizing agent slowly released and evaporated from the spongelike composition (see entire document, particularly Col. 4, lines 11-16) and 3) the spongelike composition (25) being incorporated between two parallel boards (11, 12) open on all sides (see Figures1-9 and Col. 5, lines 14-17).

The requirement is still deemed proper and is therefore made FINAL.

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2. Claims 11-14 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected group, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 4/13/07.

Information Disclosure Statement

3. The information disclosure statement filed 2/23/05 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
6. Claims 1, 5, 8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takeda (JP 2000-271200) and Hoyt (5304358).

Takeda ('200) discloses a method for deodorizing large-scale plants in which malodorous solid or liquid materials are stored by treating the unpurified air due to the malodorous material with active agents that react with or mask the malodorous substances that the air contains wherein the active agents are within disks, possessing a matrix of a crosslinked polymer containing hydrophilic groups in the form of a spongelike composition (see entire document, particularly Abstract and 3rd-4th lines of paragraph [0004] of English translation), that are arranged above the surface of the malodorous materials (see entire document, particularly Abstract and Figures 1-9).

Takeda ('200) does not appear to specifically teach that the disks (4, 4') used for deodorization process, which contains the active agents, is incorporated between two parallel boards where a stream of air flows between the parallel boards and over the spongelike composition to release and evaporate the active agents.

Hoyt ('358) discloses such configuration where the spongelike (see entire document, particularly Col. 1, lines 59-60 wherein a blotter is produced from a matrix of polymer, such as cellulose when the blotter is manufactured from paper or various other types of polymer when blotter is made from synthetics, and is deemed to be a spongelike composition) fragrance carrying medium (25) is incorporated between two parallel boards (11, 12) where a stream of air flows between the parallel boards and over the fragrance impregnated carrier to release and evaporate the active agents (see

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entire document, particularly Figures 1-9 and Col. 4, lines 11-16 and Col. 5, lines 12-17).

It was known in the art at the time of invention to position the impregnated carrier in between two parallel boards to allow air to flow between the two boards over the carrier. It would have been obvious to one of ordinary skill in this art at the time of invention to provide the fragrance carrier in between two parallel boards in the method of Takeda in order to allow air to flow over the carrier to evaporate and release the fragrance for deodorization as exemplified by Hoyt.

As to Claim 10, Takeda ('200) discloses that a number of stacks of deodorizing disks arranged concentrically are distributed in a large compost manufacturing plant in order to treat odor and remove hazardous components in the atmosphere (see entire document, particularly Abstract and Drawings 1, 6 and 8).

Thus, Claims 1 and 10 would have been obvious within the meaning of 35 U.S.C. 103(a) over the combined teachings of Takeda ('200) and Hoyt ('358).

7. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takeda (JP 2000-271200) and Hoyt (5304358) as applied to claim 1 above, and further in view of Colon (5460787).

Takeda ('200) and Hoyt ('358) are relied upon for disclosure described in the rejection of claim 1 under 35 U.S.C. 103(a).

While Hoyt ('358) discloses that lattices (formed by projections 26, 31) are incorporated between the parallel boards (11 and 12) in order to "retain the scented carrier within" (see entire document, particularly Col. 3, lines 54-57 and Col. 4, lines 17-20), neither of Takeda ('200) or Hoyt ('358) appears to specifically teach that the spongelike composition in the form of boards is of the dimension 0.2 to 5 cm wide.

As to the limitation that the spongelike composition is in the form of boards 0.2 to 5 cm wide, Colon ('787) discloses that the a board impregnated with at least one fragrance has a width from 1.5 - 2.5 inches (3.81 - 6.35 cm) in order to fit within the holder for the scented board (see entire document, particularly Col. 9, lines 10-15).

It was well known in the art at the time of invention to provide a board of width between 0.2-5 cm and laid on lattices incorporated between the parallel boards. It would have been obvious to one of ordinary skill in this art at the time of invention to provide the board of the above dimension on lattices between the parallel boards in the method of Takeda as modified by Hoyt in order to be sized correctly to fit within the holder which possesses lattices between the parallel boards as shown by Colon.

Thus, Claim 2 would have been obvious within the meaning of 35 U.S.C. 103(a) over the combined teachings of Takeda ('200), Hoyt ('358) and Colon ('787).

8. Claims 3 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takeda (JP 2000-271200) and Hoyt (5304358) as applied to claim 1 above, and further in view of Shah (WO 2001/78794).

Takeda ('200) and Hoyt ('358) are relied upon for disclosure described in the rejection of claim 1 under 35 U.S.C. 103(a).

As to Claim 3, while Hoyt ('358) discloses that a blotter is used as a substrate for fragrance impregnation (see Col. 1, lines 59-60), Hoyt ('358) does not appear to specifically teach that the substrate in the form of a crosslinked polymer is a condensation product of a maleinized or epoxidized polymer and a polyamine as the crosslinking agent.

Shah ('794) discloses that the element in which the active agent is dispersed in is a matrix of a crosslinked polymer wherein the crosslinked polymer is a condensation product of a maleinized polymer (see entire document, particularly Abstract and page 4, lines 2-21) and a polyamine as the crosslinking agent (see entire document, particularly page 4, lines 22-37 through page 5, lines 1-7) in order to perfume or deodorize air or enclosed spaces (see Abstract).

It was well known in the art at the time of invention to produce a matrix of a crosslinked polymer from a condensation product of a maleinized polymer and a polyamine as the crosslinker. It would have been obvious to one of ordinary skill in this art at the time of invention to provide a matrix of a crosslinked polymer produced from a maleinized polymer and a polyamine crosslinker in the method of Takeda as modified by Hoyt in order to deodorize air in which such matrix is located as shown by Shah.

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As to Claim 6, while Takeda ('200) and Hoyt ('358) disclose that active agents are impregnated on a carrier medium, neither appears to specifically teach that the active agents are present in amounts of 10 to 90 % by weight.

Shah ('794) discloses that the active agents are present in amounts of 10 to 90 % by weight in the spongelike composition (see entire document, particularly page 6, lines 16-19) in order to produce a sufficiently impregnated matrix for use in air fresheners or deodorizers (see entire document, particularly Abstract).

It was well known in the art at the time of invention to provide the active agent in amounts of 10 - 90 wt% in the carrier matrix. It would have been obvious to one of ordinary skill in this art at the time of invention to provide 10-90 wt% active agent in a carrier matrix comprising an air freshener in the method of Takeda as modified by Hoyt in order to produce a matrix with sufficient amount of deodorizing agent as shown by Shah.

Thus, Claims 3 and 6 would have been obvious within the meaning of 35 U.S.C. 103(a) over the combined teachings of Takeda ('200), Hoyt ('358) and Shah ('794).

9. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takeda (JP 2000-271200) and Hoyt (5304358) as applied to claim 1 above, and further in view of Shepherd (3567118).

Takeda ('200) and Hoyt ('358) are relied upon for disclosure described in the rejection of claim 1 under 35 U.S.C. 103(a).

While Takeda ('200) and Hoyt ('358) disclose that active agents are impregnated on a carrier medium, neither appears to specifically teach that the crosslinked polymer is a copolymer of a monofunctional (meth)acrylic monomer and a polyfunctional (meth)acrylic monomer as the crosslinking agent.

Shepherd ('118) discloses that a matrix containing the active agent is produced from a crosslinked polymer wherein in the crosslinked polymer is a copolymer of a monofunctional (meth)acrylic monomer (see entire document, particularly Col. 1, lines 62-73) and a polyfunctional (meth)acrylic monomer as the crosslinking agent (see entire document, particularly Col. 2, lines 3-9) and applied to a substrate in order to improve impregnation by the fragrance and to prolong entrapment of the fragrance by the substrate (see entire document, particularly Col. 1, lines 30-34 and Col. 2, line 63).

It was well known in the art at the time of invention to utilize a copolymer of a monofunctional (meth)acrylic monomer and a polyfunctional (meth)acrylic monomer as the crosslinker. It would have been obvious to one of ordinary skill in this art at the time of invention to provide such components in the method of Takeda as modified by Hoyt in order to entrap and prolong release of active agents as shown by Shepherd.

Thus, Claim 4 would have been obvious within the meaning of 35 U.S.C. 103(a) over the combined teachings of Takeda ('200), Hoyt ('358) and Shepherd ('118).

10. Claims 5 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takeda (JP 2000-271200) and Hoyt (5304358) as applied to claim 1 above, and further in view of Welch (20030024997).

Takeda ('200) and Hoyt ('358) are relied upon for disclosure described in the rejection of claim 1 under 35 U.S.C. 103(a).

As to Claim 5, while Takeda ('200) discloses use of active agents in a matrix (in disks 4, 4'), neither Takeda ('200) nor Hoyt ('358) appears to specifically teach that the active agents are slowly and uniformly released from the carrier over a period of at least three days.

Welch ('997) discloses that the active agents are released slowly and uniformly from the spongelike composition over a period of at least three days in order to provided a sustained perfume release rate (see entire document, particularly page 25, paragraph [0220]).

It was known in the art at the time of invention to provide a method of fragrance release over at least three days. It would have been obvious to one of ordinary skill in this art at the time of invention to provide the release rate of at least 3 days from the substrate/spongelike composition in the method of Takeda as modified by Hoyt in order to apply the active agent to freshen and deodorize the targeted area for an extended duration as shown by Welch.

As to Claim 8, while Takeda ('200) and Hoyt ('358) disclose the use of active agents in a matrix, neither Takeda ('200) nor Hoyt ('358) appears to specifically teach that the spongelike composition contains at least 0.1 % by weight, preferably 1 to 8 % by weight, of water.

Welch ('997) discloses that in an air freshening article the free water content of the article should be relatively low, preferably less than about 5% by weight of the air freshening article (see entire document, particularly page 25, last three lines of paragraph [0211] and page 29, claim 52) in order to provide a film, foam, sheet, or gel type of air freshening article for scenting air and for providing moisture at a target site (see entire document, particularly page 25, 3rd line from the bottom of paragraph [0211] and paragraphs [0223]-[0224]).

It was well known in the art at the time of invention for an air freshening matrix to possess at least 0.1 wt% of water. It would have been obvious to one of ordinary skill in this art at the time of invention to provide a water content of at least 0.1 wt% in the method of Takeda as modified by Hoyt in order to obtain a perfume releasing air freshening article that also possess and provides moisture as shown by Welch.

Thus, Claims 5 and 8 would have been obvious within the meaning of 35 U.S.C. 103(a) over the combined teachings of Takeda ('200), Hoyt ('358) and Welch ('997).

11. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takeda (JP 2000-271200) and Hoyt (5304358) as applied to claim 1 above, and further in view of Oreck (6511548) or Giolitti (5424049).

Takeda ('200) and Hoyt ('358) are relied upon for disclosure described in the rejection of claim 1 under 35 U.S.C. 103(a).

While Hoyt ('358) disclose use of fragrance, Hoyt ('358) does not appear to specifically teach that the active agents are aldehydes, ketones, alcohols, esters or natural oily essences.

Oreck ('548) discloses that the active agents that are impregnated on a porous foam, sponge or polymeric substrate are an essential oil, esters, ketones and alcohols (see entire document, particularly Col. 4, lines 19-31 and 44-49) in order to deliver fragrance to a specific site (see entire document, particularly Col. 3, lines 39-42).

Giolitti ('049) discloses that "the active substance contained in the lattice of the polymer material preferably consists of ketones, aldehydes, aromatic esters, ...and essential oils" (see entire document, particularly Col. 1, lines 37-40) in order to reduce odors by "imprisoning" the molecules responsible for the unpleasant odor at a targeted site (see entire document, particularly Col. 1, lines 10 and 41-42).

It was well known in the art at the time of invention to provide an active agent consisting of aldehydes, ketones, alcohols, esters or essential oil. It would have been obvious to one of ordinary skill in this art at the time of invention to provide one member of the active agents listed above in the method of Takeda as modified by Hoyt in order to add fragrance and reduce malodor from the target site as shown by Oreck or Giolitti.

Thus, Claim 7 would have been obvious within the meaning of 35 U.S.C. 103(a) over the combined teachings of Takeda ('200), Hoyt ('358) and Oreck ('548) or Giolitti ('049).

12. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takeda (JP 2000-271200) and Hoyt (5304358) as applied to claim 1 above, and further in view of Johnson (5071645).

Takeda ('200) and Hoyt ('358) are relied upon for disclosure described in the rejection of claim 1 under 35 U.S.C. 103(a).

While Takeda ('200) and Hoyt ('358) discloses the method of using matrices/compositions for air freshening purposes, neither appears to specifically teach that these matrices contains additionally flame retardants, sublimation assistants and/or powder in order to prevent caking.

Johnson ('645) discloses an active agent delivery device in which a microporous material (see entire document, particularly Col. 1, lines 41-44) is impregnated with a releasable active agents such as fragrances (see entire document, particularly Col. 1, lines 67-68) along with flame retardant (see entire document, particularly Col. 4, lines 54-55) in order to avoid ignition of any component of the delivery device during use.

It was well known in the art at the time of invention to provide additional components such as a flame retardant in the spongelike matrix used as a material for fragrance/deodorizer impregnation. It would have been obvious to one of ordinary skill in this art at the time of invention to provide a flame retardant in the method of Takeda as modified by Hoyt in order to ensure that the deodorization process will not cause the matrix from becoming inflammable as shown by Johnson.

Thus, Claim 9 would have been obvious within the meaning of 35 U.S.C. 103(a) over the combined teachings of Takeda ('200), Hoyt ('358) and Johnson ('645).


Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following references relate either to the field of the invention or subject matter of the invention, but are not relied upon in the rejection of record: 4587129, 5342584, 20020197187, 6168088, 5738831.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Regina Yoo whose telephone number is 571-272-6690. The examiner can normally be reached on Monday-Friday, 9:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gladys Corcoran can be reached on 571-272-1214. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


GLADYS JP CORCORAN
SUPERVISORY PATENT EXAMINER

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